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MONDAY, DECEMBER 18, 1922

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VOL. XVI, No. 10

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WHOLE No. 433

A PHYSICIAN'S TRIBUTE TO THE CLASSICS

On April 25, 1922, the Medical Society of the State of North Carolina met at Winston-Salem. The President, Dr. Hubert A. Royster, of Raleigh, delivered an address on *The Real Things in Medicine*. The address was published in *The Journal of the American Medical Association*, on August 5 (79:424-428). Some extracts from it will be of interest and of value, directly and indirectly both, to students and teachers of the Classics.

Brains are the alpha and omega of the man of medicine. . . . The study of medicine bestows no more brains and adds not one cubit to the mental stature. It provides only a few more implements of the mind to be used for good or for ill. Unless the roots are deeply planted in the soil of real learning, the study of any science narrowly pursued takes away from the natural resources of the mind more than it puts in. In other words, a finely endowed intellect is needed to carry on in the realm of science, to withstand its temptations toward the illogical, to keep clear headed in the midst of fact and fancy. . . .

Make no mistake about culture. Culture is refinement, accuracy, poise, resourcefulness; it is not effeminacy, weakness, conventionalism, impracticability. We have been getting too far away from the humanities, from classical education, from academic scholarship, if you please. In the quest of science—and there is no nobler pursuit—we have set up utilitarian courses, called premedical and certainly premeditated, for the purpose of reducing to a minimum all those things which do not bear directly on the matter in hand, and swelling to a maximum those that are concerned in the material things of medicine. In this we have left out the very bed rocks of learning: the capacity to interpret the phenomena and the power to express the findings. If the average trained laboratory worker in our country today has any weakness, it is his inability to convey his ideas, to put down what he has done, to express his results in terms clear and terse. Generally his work surpasses his words. And it is not the misfortune of the individual, but of the plan which essays to substitute scientific research for sound scholarship; to get the one without the other, when we may have both. It is the common failing of the later generation of medical men that they do not write so lucidly or think so accurately as those just before them. There are, of course, numerous and notable exceptions. But the observation is probably correct, and its explanation lies in the small stress placed on actual scholarship required of one entering the profession of medicine.

We are living in an age of inaccuracy. We are inaccurate in thought, in speech, in spelling, in writing. We know a great deal; but do we know anything very well? Short cuts and practical preparation are the order of the day. Language, the only medium through which thoughts are given out, has been almost forgotten. Will it be considered very old fashioned if I should suggest that the neglect of the languages, and particularly the banishment of Greek, may be responsible for our loose thinking and our lack of scholarship? The value of Greek for the medical student

might be a theme for a discourse in itself. If you should go over the evidence, you would be surprised to find how much medicine owes to the Greek language, what a very large number of our words referring to diseases, operations and organs are derived from the Greek—fully as many as from Latin. And many of those coming through the Latin were taken originally from Greek. "We suspect, too, that our men of science who are supposed to be opposed to 'so much Greek' must study that language secretly or they assuredly could not name the tools of their own trade". The chief advantage of the study of Greek is a training in accuracy, in the expression of nice shades of meaning, the very essence of a cultivated mind engaged in scientific thought. We cannot divorce science and culture; we cannot go on rearing a race of seekers after truth who are not trained thinkers; we cannot fail to perceive that the education of a candidate for a learned profession means for us, as it has meant for all the older nations, a thorough grounding in the ancient and honorable arts and classics before we approach the special study needed for our dignified calling. That way trod our great fathers, who outstripped us with the means at their disposal; that way lies our hope of elevation, of bringing back the well rounded medical man and adding to him the marvellous scientific attainments of the present age. My thought was expressed by Thomas L. Stedman, in these words: "Some day the pendulum will swing the other way and a new renaissance will once more join culture to knowledge to make the perfect physician".

Utterances like those of Dr. Royster, especially with respect to the inability of scientific men to express themselves in English, have appeared from time to time in *THE CLASSICAL WEEKLY*. Witness vigorous remarks by Dr. W. H. D. Rouse, in an article entitled *Learning English through the Classics*, 6:17-18, 25-26, by Mr. Paul Elmer More, and more especially by Mr. T. A. Rickard, of the Royal School of Mines, London, Editor of a United States technical journal, in 9:97, 8:89. Pertinent too is the article by Professor Trotter, of Swarthmore College, on *The Terminology of Anatomy*, 11:131-134.

C. K.

A CHEMICAL INTERPRETATION OF LIVY 21. 37. 2¹

Pittsburgh is the laboratory as well as the workshop of the world, and the odor of chemicals penetrates even into the Latin class-room. We have in the University of Pittsburgh the Mellon Institute of Industrial Research, designed to bind together science and industry. To-day it goes one step further, and links together science and the Classics, for the technical

¹This paper was read at the Sixteenth Annual Meeting of The Classical Association of the Atlantic States, at the University of Pittsburgh, April 29, 1922.

information behind this paper has been largely furnished by Messrs. W. A. Hamor and E. W. Tillotson, Assistant Directors of the Institute.

When I read Livy with a class, I always plan to read at sight the description of the descent of the Alps. Few scenes in all literature are more graphically described, few episodes in all history are more thrilling. We see weary soldiers, almost exhausted by their difficult and dangerous ascent, resting at the summit, now and then welcoming the stragglers that have finally caught up with the column. A fresh snow-fall increases their difficulties and hardships. But the general leads his weary and discouraged little band to a promontory from which a view of the plains about the Po can be gained, and tells them that a short and easy descent, a battle or two, will give them possession of all Italy and even of Rome herself².

The army now resumes its descent by a route that is made easier by its leader's promise of a success not far away. Even the most jaded, sophisticated, and world-weary freshman sits up with renewed interest at what follows. I describe the scene in something like Livy's own language. The column is crawling slowly down the road, gradually elongating as the difficulties of the march accumulate. But suddenly the van is checked. We see the column piling up in the narrow pass as the units in the rear catch up with the advance. The word comes back along the line that the road is blocked by a fresh landslide that has carried away the face of the cliff, leaving the army confronted by a sheer perpendicular precipice a thousand feet in height. Hannibal himself hurries forward. 'What was done, what to do—a glance told him both'. He sends part of his force to try a roundabout way over a glacier. The new snow, lying on top of the old crust, is rapidly converted into slush by the feet of men and animals. The men slip and fall. The animals break through and are trapped in the holes they themselves have made in the old crust. So they are forced back upon the precipice where a road had once been. The soldiers clear away the snow from it, build a huge bonfire, pour vinegar on the heated rock, thus softening it so that they can work it with their tools. So they make a new road easy enough in its grade for the army and even for the pack train.

The passage bristles with difficulties and the class bristles with questions. How could snow stick to the face of a perpendicular cliff? How, for that matter, could a fire be built there? How could the soldiers gain a foothold on it to clear away the snow and build the fire? What kind of rock will respond to such treatment? Where did the vinegar come from to disintegrate the rock? Would not water have done equally well in cracking by sudden contraction the

heated stone? What was the substance that Livy calls vinegar?

We may separate these questions into families, and our inquiry follows the same divisions. First we may consider the thousand-foot precipice. Polybius (3.54) tells the story in very similar language, but with one important difference: he says merely that about a thousand feet of road had been carried away, and this at once suggests that perhaps, in the text of Livy, we should emend *in altitudinem* to *in latitudinem*. But I have as yet no absolutely certain case in Livy where *latitudo* means clearly 'horizontal distance' and I therefore refrain from insisting on the point at present. Our uncertainty is increased when we find that *in pedum mille* is an emendation of the Renaissance scholar Valla (the MSS readings are: C, *impeditus dum ille*; M, *impeditus cum illo*). The emendation is so reasonable, in the light of the statement in Polybius, that it has been universally accepted, but the corruption here makes it easier to believe that there may be more corruption in the same sentence (21.36.2). Polybius was so much nearer the event in point of time, and so much better informed as to Hannibal's route that we are justified in not insisting on the thousand vertical feet, and so we get rid of the first group of questions. Polybius, we are told, visited the Alps to determine the pass that Hannibal used. He is no more specific than to say that the construction of the road required 'infinite toil'. The answers to the other questions are not much affected by this decision. The difficulty of building the road is great enough on any theory. Before leaving this point I wish to quote a description of Alpine scenery (Ball, *Western Alps*, revised edition, by Coolidge, 106):

The view from the Col toward Susa lies down the uppermost narrow portion of the Clarea valley. . . . In ½ hour the traveller reaches the little rocky basin known as the Plan du Clapier and traversed by the Clarea. The view from this point is extremely interesting. From the verge of the precipitous rocks that fall away immediately below him, the traveller sees the lower valley of the Clarea or Clairée, 3,000 feet beneath him, . . . and beyond it <the Touillies range> the ranges that enclose the valley of the Dora Riparia on the S.

If this is actually the place where Hannibal crossed, as I am inclined to believe, Livy's story of the thousand-foot precipice is less incredible. The narrative of Polybius also fits this place. I hope to examine this whole question in greater detail later.

A note in THE CLASSICAL WEEKLY 15.168 relates experiences with breaking stones by heating them and then dashing cold water on them. The author believes that Hannibal used water and not vinegar; he is perhaps influenced by Gulliver, who states gravely that Hannibal himself assured him that he had not a drop of vinegar in his whole camp (Travels, Part 3, Chapter 7). This brings us to the second group of questions, concerning the method of disintegration of the rock. The ancient authorities disagree, as we have seen, as to the nature of the place where Hannibal descended. Polybius does not mention the use of fire and vinegar, but the story was so generally accepted by

²It is not my purpose just now to examine this story: it is perfectly simple to declare this and the rest of the narrative that I am to discuss pure fiction, as many critics have done. I prefer, however, not to reject the statements of ancient historians if any reasonable explanation of them can be found or devised. Students of military geography disagree as to whether any place can be found on any of Hannibal's possible routes where such a view can be gained. I am myself convinced, as far as one can be without a personal inspection of the region, that Livy's story—which is essentially that of Polybius also—is true.

antiquity that it can not be utterly ignored. Mr. Herbert Hoover (in his translation of Agricola's *De Re Metallica*, 118, n. 14; see *THE CLASSICAL WEEKLY* 9.182-183) makes the following generalization on the passage and the discussion thereof:

...the real scholars have passed over the passage with the comment that it is either a corruption or an old woman's tale, but...hosts of soldiers who set about writing the biography of famous generals and campaigns almost to a man take the passage seriously, and seriously explain it by way of the rock being limestone or snow, or by the way of explosives, or other foolishness.

Nevertheless I shall run the risk of excluding myself from the real scholars, and shall perhaps add to the foolishness, as ancient writers did. Thus Appian (8.1.4) tells the story even more circumstantially than Livy did. Juvenal (10.153) made it a matter of declamation. Silius Italicus (3.642), Ammianus (15.10.11) and Servius (ad Aen. 10.13) all mention it. No doubt these all borrowed it from Livy, as Mr. Hoover and others think, but the clear statement in Pliny the Elder (23.57, and elsewhere) can not be so easily set aside: <acetum> saxa rumpit infusum, quae non ruperit ignis antecessens³. The process of using fire and some liquid is thus sufficiently vouched for, no matter how doubtful we may be as to the actual liquid used. So too, in the sixteenth century, Agricola, discussing assaying, in the seventh book of his *De Re Metallica* (Hoover, 231), says that the hardest rocks are sprinkled with vinegar that they may be more easily softened, and reports the use of the lees of vinegar as a flux (Hoover, 234).

The effect of fire and water on various stones has in recent years been made the subject of scientific experiment (see McCourt, *Fire-Resisting Qualities of Some New Jersey Building Stones*, State Geologist's Report for 1906, and *Fire Tests of Some New York Building Stones*, Bulletin 100 of the New York State Museum for 1906, and the references cited therein).

Of the various methods used in these tests one seems to approximate the conditions of Hannibal more closely than the others. In this a three-inch cube is heated in an oven to a temperature of 550 degrees Centigrade, taken out, and then cooled suddenly by playing on it a stream of water. It is doubtful whether Hannibal could have produced so high a temperature as this, but these experiments, as well as experience in bad city fires, demonstrate the damage that may be done to rock by heating and sudden cooling. There is other testimony too as to the effect of water on hot stone. Merrill (*Stones for Building and Decoration*, 394, note) says that an "ancient and well-known method" of breaking stones consists in striking or throwing cold water on a heated stone. He also says that the Romans sprinkled hot stones with vinegar, but does not know whether this accelerated the splitting or gave direction to the cracks. According to the same author, the same method was used by the ancient Peruvians. Lines of cleavage may be marked out on heated quartz by laying a wet cord on the stone. In modern practice

in cutting granite, a stream of cold water plays on the stone, but this apparently is done to cool the saws rather than to aid in their operation.

Different kinds of stone react differently to this treatment. The geology of the various passes that Hannibal might have used will be the subject of a separate discussion. On these passes gneiss, secondary slates, sandstone, and calcareous schists are the most important for our purposes. Of these, only the last variety is much affected by heating and cooling, according to the tests previously mentioned. A pure limestone is little affected by sudden cooling unless the point of calcination has been reached at a temperature of 600-700 degrees Centigrade. But these rocks are not pure limestone, and these impure stones disintegrate badly under this treatment. The different elements respond unevenly, and this affects the surface far more than would be true of a homogeneous stone. This particular line of evidence points to the Col du Clapier as the pass which Hannibal used (for other arguments in favor of this pass, see Wilkinson, *Hannibal's March*)⁴.

There is, then, nothing incredible in the story that Hannibal heated the rocks and then softened them with some liquid. The difficult part comes in when we consider the enormous quantity of wood required to bring to a high temperature about 6,000 square feet of stone surface. Fire alone is said to have a great effect on certain stones, while nature unaided breaks off huge masses of stone through the natural variation of temperature from season to season. This of course requires long periods of time (Merrill, *Rocks, Rock-Weathering, and Soils*, 160, and note).

This brings us to ask whether a more powerful liquid than water would have simplified the problem, by accomplishing disintegration at a lower temperature or otherwise. Thus we come to our third group of questions, those dealing with the meaning of *acetum* in the Livy passage.

The first method of dealing with the story is to dismiss it as pure fiction, the invention of Livy or of his source, copied and transmitted through literary channels. This will not, however, satisfactorily account for the powers attributed to vinegar by serious semi-scientific writers, such as Pliny and Vitruvius. To explain their statements we must accept the existence of a substance called by them *acetum*, and attempt to determine its nature and its characteristics.

Acetum appears regularly to be wine vinegar, or possibly sometimes merely sour wine. Its essential constituent is, therefore, acetic acid, the only acid, in the chemical sense, known to antiquity. The extent and the range of its uses may be learned from a glance at the word in the *Thesaurus Linguae Latinae*. It has certain medicinal properties, it dissolves pearls, it is

⁴In *The Classical Journal* 17 (1922), 446-453, 503-513, Professor Glanville Terrell, of the University of Kentucky, discusses again Hannibal's Pass Over the Alps. He has no patience with Livy, but ranks Polybius high. He believes that "the route up the Isère and over the Little St. Bernard fulfils every requisite for Hannibal's pass according to Polybius; that every other pass fails in some important particulars..." For an argument that Hannibal crossed by the Col du Clapier see Paul Azan, *Annibal dans les Alpes* (Paris, 1902).

³Vitruvius (8.19) says that fire and vinegar will break even lava.

a salad dressing, and has other food uses (it is part of a soldier's rations, apparently of his emergency rations too), and it has various uses in the arts, the most important for our purpose being in the treatment of stones of certain types. After the classical period, we find in *Agricola*, as already noted, its use in assaying. We must conclude either that different substances are meant by *acetum* and that these were carelessly confused by Pliny and Vitruvius, or that *acetum* is actually vinegar, for no other one thing will so nearly meet the description as vinegar.

Let us return to Hannibal's pass. Let us further assume that he crossed by the Col du Clapier, where the rock is largely calcareous schist. We may think that the landslide left a broken, irregular surface, with numerous crevices where a liquid could lodge and so penetrate into the more solid rock below. The only stone upon which acetic acid acts readily is limestone, out of which it removes the calcium. Heating will accelerate the reaction somewhat, but at any rate the acid would act at a far lower temperature than would water. Even a small amount of acid would start a softening process which would make the rock far more easily workable by tools than it had been before. Such a thing would make a good story, and might easily develop into a tradition of the sort that Livy follows, a tradition that seemed to say that the whole surface was so treated. It may have been, but this is not a necessary part of the story. I believe, then, that Hannibal did use vinegar. I do not know how much: to soften the entire roadway would have demanded a quantity of vinegar almost beyond credibility. Dio (36.18) tells us that traitors in Eleuthera, when the town was under siege, saturated a brick tower and thus rendered it weak enough to be overthrown. This might have been effected in two ways, by the action of the acid on mortar, if the tower was so built, or by the action of the acid on the porous, sundried brick out of which the tower was probably constructed. When once the power of vinegar to dissolve limestone was established, unscientific writers might easily attribute to it similar powers over other kinds of stones that were really immune. I admit at once that this is not altogether satisfactory. Pliny may be excepted, but Vitruvius was a practical architect, presumably familiar with the properties of building stones, and it is hard to see how he could have been so badly mistaken. But mineralogy was not a science that had been highly developed by the Romans (compare Moore, *Ancient Mineralogy*, 1), and their nomenclature may have been at fault. So it appears to have been in a passage of Ovid (*Met.* 7. 107-108) where *silex* is used of limestone, though this may be mere poetic license.

One more conjecture should be considered. Hénbert (*Vie d'Annibal*, 2.253 ff.) and Morris (*Hannibal*, 100) believe that what Livy calls *acetum* was an explosive (compare Felice Ferrero, *The Valley of Aosta*, 143 ff.; I owe the reference to Professor Knapp). Probably the only thing known to antiquity that might be so described was Greek fire, presumably a

mixture of sulphur with asphalt or another bitumen-product. That this had any rending power is doubtful; that it produced heat is certain; that it could act as a solvent and function in the other ways described by our authorities is impossible. I shall discuss the question elsewhere. It must be regarded as a possibility, however, that Hannibal used this in building his road.

It appears, then, that we may accept Livy's narrative as it stands, except the perpendicular thousand-foot cliff, which should probably be regarded as a steep descent on which a thousand lineal feet of road had been carried away. As Hannibal had acetic acid, in the form of vinegar or sour wine, and as acetic acid is a solvent for certain kinds of stone, we may accept that part of the story, and we are then led to the conclusion that Hannibal crossed by the Col du Clapier, for there conditions would have been most favorable for this method, and apparently only there could such a method have been used with any prospect of success. A more complete examination of the arguments for this pass will be given at another time. Despite the critics, there is nothing inherently impossible or even improbable in Livy's narrative, except that it is not expressly confirmed by Polybius.

UNIVERSITY OF PITTSBURGH

EVAN T. SAGE

MODERN PARALLELS TO LIVY 21.37. 2-3

A newspaper report of forest fires, under date of November 9, 1922, says:

A state forestry report just made tells of fire being spread by bursting stones which were in the path of fires and were heated to such an extent that they flew into pieces.

A still more interesting instance is found in an article entitled *The Land of the Free in Africa*, in *The National Geographic Magazine* 42.425-426 (October, 1922). In describing a remarkable road built through the jungle, the author, Mr. Harry A. McBride, says:

Huge boulders of rock would come to light, often in the exact center of the roadway. No tackle, chains, or tractors were available; so great fires were built in trenches dug around the rocks, heating the stone until it cracked, and, piece by piece, could be removed.

MUHLBERG COLLEGE,
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ROBERT C. HORN

REVIEWS

Etruscan Tomb Paintings: Their Subjects and Significance. By Frederik Poulsen. Translated by Ingeborg Andersen. New York: Oxford University Press, American Branch (1922). Pp. x + 63; Figures 47. \$5.65.

The importance of this book is as great as the number of its pages is small. At last a book exists in English that gives a clear and satisfactory discussion of the chronology and the meaning of the fascinating frescoes on the walls of the chamber tombs of Etruria, couched in a style that makes it a pleasure for the scholar and the layman alike to read. The distin-

guished Danish archaeologist, whose book on Delphi is well-nigh indispensable for the lover of things Greek (reviewed by Professor David M. Robinson in *THE CLASSICAL WEEKLY* 15.45-48), and who, in his recently published *Ikonographische Miscellen*, shows his excellence in other fields of archaeology, has now proven his competence in the Etruscan field, by producing what will undoubtedly be used for a long time to come by English and American teachers as a text-book for classes in Etruscan archaeology. As this reviewer laid the book down after finishing it, his feeling was one of profound gratitude that this long-felt need has been at last so splendidly filled.

For those who are not primarily students of Etruscan archaeology, it will be worth while briefly to summarize the situation as it has existed for years, and as it still in some measure exists. There is no good general text-book in English on Etruscan archaeology. Dennis's *Cities and Cemeteries of Etruria*, the most ambitious work in English, has long been superseded; and when, in 1910, this reviewer, then a graduate student, took the course offered in Etruscan archaeology at Harvard University, the only general text-book to which reference could be made was Martha's *L'Art Etrusque*, published in 1889. Even now this remains the only general text-book, although it is very much out of date, and even though the situation has improved somewhat in the last ten years. During this time, several popular books have come out, which have reawakened interest in Etruria; scholars in increasing number have returned to Etruscan problems for the subjects of papers in various periodicals; and the last twelve months have given us two books of major importance in English, in special fields of Etruscan archaeology—Mrs. Van Buren's book on early architectural terracottas (reviewed by this reviewer in *The Classical Journal* 17.349-350, March, 1922) and this book, by Poulsen, on Tomb Paintings. In German, Weege has produced his monumental *Etruskische Malerei* (reviewed by Dr. T. Leslie Shear in *THE CLASSICAL WEEKLY* 15.166-167), which appeared between the original Danish edition of Poulsen's book, and its republication in English. At last a student can find plenty of material for the study of Etruscan painting.

The book takes up the chronology of the tomb-paintings that have come down to us; and it is natural that most of the material published is from Corneto, which is admittedly the largest and finest of all Etruscan necropolises. Nevertheless, the earliest example is, as all authorities agree, the Campana tomb, at Veii, and it is with this tomb that Dr. Poulsen begins. He dates it at the end of the seventh century B. C., and considers it (8) as inspired by "some magnificently coloured wall-tapestry imported. . . from Crete or one of the islands in the Aegean Sea, to the vase-paintings of which the ornamentation of the tomb shows close affinity".

The next in order is the Tomba dei Tori, at Corneto, which the author correctly cites as influenced by Ionia; but he might have even made it a little more

specific, for the style of painting here is almost identical with that of the so-called 'Tyrrhenian' amphorae, which are usually considered, nowadays, Attic-Ionic.

The next tomb to be discussed is the 'Tomb of the Augurs', also at Corneto, which is influenced strongly by Ionia, the closest parallel being in the class of vases usually known as 'Caeretan Hydriae', dating in the sixth century B. C. This tomb is one taken out of a large number as typical. Here, in one minor point, I find myself unable to agree with the author. On page 12, in describing the scene portrayed in Fig. 4, the author speaks of the animal at the right, attacking a man, as "a dog", and later as a "ferocious bloodhound"; on the following page, he again refers to him as a "bloodhound". Before deciding to differ with Dr. Poulsen in his definition of this animal, I consulted the original publication of the tomb in the *Monumenti dell' Istituto di Corrispondenza Archeologica* (11, Pl. XXV), and the reproduction in Weege, *Etruskische Malerei* (Pl. 94), the result of which is, that, although the animal is probably a dog, he is certainly *not* a bloodhound, in the usually accepted meaning of the term. Let anyone who doubts this go to a dog show at the earliest opportunity, or, failing that, let him consult the article Dog in the *Encyclopaedia Britannica*, where a picture of a bloodhound is published, and where we read that the bloodhound in its present form is one of the oldest species of dog in existence. If this is a dog, it is probably more like a greyhound or wolfhound type, and not a true bloodhound. But the publication in Dr. Poulsen's book does not make him look like a dog at all, but more like a hunting leopard. The shape of the head, and the tail, are in this picture more feline than canine; and the animal is apparently portrayed as not only biting its victim, but rending him with its claws, something a true dog never does. The color of the coat offers no serious obstacle to the adoption of this theory, for two reasons: (1) the indifference of the Etruscans, so often emphasized by Dr. Poulsen himself, to naturalism in rendering the objects portrayed (see especially page 24 for proof of this); (2) the fact that there exist species of leopards with solid coats. But, after checking this picture up with the other publications mentioned, I believe that this animal is probably a dog after all; but whatever else he may be, he is *not* a bloodhound.

Dr. Poulsen then describes, in a most facile but thoroughly learned way, the scenes shown on the different tomb-frescoes, such as athletic sports, dances, symposia, scenes from mythology, and the cult of the dead. He selects the following tombs, besides those already mentioned, for especial discussion, in the order in which they are here set down: Tombe delle Iscrizioni, del Barone, delle Bighe, degli Leopardi, and degli Scudi, all at Corneto; Tomba Golini, at Orvieto; Tomba dell' Orco, at Corneto; Tomba François, at Vulci; Tombe del Tifone and del Cardinale, at Corneto. These tombs are described at some length, and, as a rule, two or more views of each are given.

The following tombs are also partly published, and less fully described: Tombe del Pulcinella, del Morte,

del Triclinio, Francesca Giustiniani, delle Leonesse, and del Morente, all at Corneto; Tomba della Scimmia, at Chiusi; and Tombe del Vecchio, del Letto Funebre, and della Pulcella, at Corneto. In this group is published for the first time the charming fresco of La bella Ballerina di Corneto, in the Tomba Francesca Giustiniani, which was first mentioned, in extravagant terms of praise, by Dennis (*Cities and Cemeteries of Etruria*³, 1.372), and is undoubtedly one of the most beautiful of all Etruscan frescoes (it is the frontispiece of Poulsen's book).

We look in vain, however, for reproduction here of two of the most interesting of all Etruscan tombs—the Tombe della Caccia e Pesce and the Tomba degli Vasi Dipinti, at Corneto. Mention is made of them, but only in the most cursory way. It would have been well to have published at least the first-named of these, as it is one of the nearest to the town of Corneto, and therefore one of the most familiar to visitors to the necropolis. The naïveté, freshness, and originality of the composition make this one of the most charming of all Etruscan tomb-paintings, and, to this reviewer, one of the most delightful things in all ancient art. Nor do we find published here the historical frescoes from the François tomb at Vulci, which are among the most important of all. We must probably assume that copies of these frescoes do not exist in the Heltig Museum at Copenhagen, for the author seems to limit himself pretty strictly to those which have been copied for that Museum.

Nobody can read this book without learning much not only about Etruscan art, but also about the daily life, the history, and the moral characteristics of the Etruscan people. It is quite probable that Dr. Poulsen is absolutely right in his statements as to the crudity and worthlessness of Etruscan poetry and drama (18, 19), and we know that there is an utter dearth of literary remains from Etruria. Even in these tombs, as Dr. Poulsen constantly shows, although the scenes are taken from Etruscan life, and the costumes worn are Etruscan, the artists, especially in the examples of the fifth century B. C., are either actually Greeks, as is certainly the case in the Tombe del Barone (21) and delle Bighe (28), at Corneto, or are working under strong Hellenic influence. In this connection, the author comes out as a strong defender of Etruscan morals, at least in the symposium scenes, showing that the women who recline at these banquets with men are not *hetaerae*, but respectable women, the wives of the men with whom they are grouped. He admits, however, that the morals of the Etruscans were not good, but sees no need to make them appear any worse than they were. In this he seems to me to have proved his point, and to have refuted successfully the claims of Weege, Dennis, and others that these women were *hetaerae*. He does concede, however, that the dancing-girls in the different tomb-paintings were no better than they should be, and that the Etruscan paintings of man and wife often show a degree of freedom not found in contemporary Greek art.

We notice that some of these women wear the typical cap of the Etruscans, usually called the *tutulus*, which Dr. Poulsen thinks (23), came to Etruria from the Hittites by way of Cyprus. Why not by way of Lydia? The American excavations at Sardis point to the probability that Herodotus was correct in assigning Lydia as the place of origin of the Etruscans, and certainly it is nearer the land of the Hittites than Cyprus is.

Very important are the chapters dealing with the character of the Etruscans, especially Chapters XIV-XVI. The very suggestive point is hinted at that the rise and the fall of the Etruscans can be traced in these tomb-paintings; and this theory is developed by comparing them with what we know of the history of Etruria, beginning with the joyous scenes painted in the heyday of Etruscan imperialism, and ending with the note of utter hopelessness struck in all the frescoes of the later tombs. In these chapters much stress is laid, and rightly, on the influence of Etruria on Rome, and the survival of Etruscan institutions and customs, especially in religion and divination, right down to the days of Julian the Apostate (48). Dr. Poulsen also shows how the amorousness of the Etruscans gave place during their decay to gross immorality, which doubtless had something to do with influencing the Romans of the early Empire into similar paths. The cruelty of the Etruscans, amply shown on the tomb-paintings, especially in the François tomb, at Vulci, and the Tomba dell' Orco, at Corneto, is rightly stressed by Dr. Poulsen, and the following quotation epitomizes the Etruscan character in a singularly happy way (52): "Sex and cruelty are, to use a chemical expression, the 'basic group' of the Etruscan mind".

Dr. Poulsen offers a chronology somewhat differing from that of Weege and others, but not always convincing, especially in his dating of the later tombs, some of which, like the Tomba del Tifone, at Corneto, he puts far too early, in the opinion of this reviewer, who also agrees with Miss Swindler, of Bryn Mawr College (see her review of this book in *The Art Bulletin* 4 [1922], 112), in dating the Tomba degli Scudi, at the same place, in the end of the fourth century, rather than in the fifth.

The technical side of the book is beyond reproach. In binding it is uniform with the late Guy Dickins's *Hellenistic Sculpture* (reviewed by Professor David M. Robinson in *THE CLASSICAL WEEKLY* 15.118-120), and with Mr. J. D. Beazley's *The Lewes House Collection of Ancient Gems*. In the quality of the printing, paper, and illustrations, it is also exactly the same, with the same large, clear, beautiful type, and with wide margins. The illustrations as a rule are also splendid. One is inclined to doubt the accuracy of the copy of the Tomba degli Auguri (Fig. 4), on account of the wide variation in the rendering of the figure of the dog, as compared with Weege (*Etruskische Malerei*, Pl. 94) and the original publication in the *Monumenti dell' Istituto* (11, Pl. XXV), in both of which the shape of the head, the tail, and the paws are very different. One also wishes that some of the illustrations were in

color, to give an idea of the actual condition of these frescoes; but doubtless this was impossible.

In conclusion, let me repeat that those who wish a thorough and satisfactory treatment of the subject of Etruscan painting can now turn to a book in English as the best in any language on the subject. In many respects, although not so complete, this is a far better book to use as an introduction than Weege's *Etruskische Malerei*, which, in the opinion of this reviewer, is in many ways a badly balanced book. Therefore, the versatile Dr. Poulsen has to his credit, besides his many achievements in other fields, what promises to be for many years the standard text-book on Etruscan painting.

BOSTON, MASSACHUSETTS

STEPHEN BLEECKER LUCE

History: Its Theory and Practice. By Benedetto Croce. Authorized Translation, by Douglas Ainslie. New York: Harcourt, Brace, and Company (1921). \$3.75.

The importance of the Neapolitan philosopher, Benedetto Croce, was quite unknown to the reviewer before this year. Briefly stated, his history is as follows. About 54 years of age, he has had a thorough German training, is independent of any University connection, and is a frequent contributor to the excellent Italian literary and philosophical journal, *La Critica*. In a series of four books, of which the one before me is the last, Signor Croce has presented a complete statement of his philosophic system, which he calls the Philosophy of the Spirit. Mr. Douglas Ainslie, a devoted English admirer, who believes that "Croce will one day be recognized as one of the very great teachers of humanity", has the credit of making Croce's work known to the English reading world, through his translations of the *Aesthetics*, the *Logic*, the *Philosophy of the Practical*, and, now, the *History*.

Signor Croce believes that all things which lie outside the human mind, all nature and all facts, are dead things. They have *potential* life; they acquire life when they have become "informed" by the human mind. To the person of classical training this idea clarifies itself much more readily as an Aristotelian conception than as Hegelian—the *Nous* which gives form to material things being, in Croce's conception, the human mind. In this belief of the inertness of matter and of facts we find the key to Signor Croce's understanding of the meaning and the place of history in human thought. History cannot be a scientific form of human knowledge (see Ainslie's translation of the third Italian edition of the *Aesthetics*, 44) because its object is the representation of the particular, the individual, whereas the object of science is general types. History cannot elaborate a *concept* of a person, of an event, or of a period. It can only *represent* individual facts. In Croce's *Aesthetics*, therefore, history appears as practically identified with art, with the marked difference that the artist deals with the *possible*, as opposed to the historian, who deals with what is real.

In the study called History, Croce's idea has de-

veloped into an identification of history and philosophy (61). He makes an interesting definition of chronicle as the amassing of brute facts, uninformed by mind. Chronicle is dead history and history is living chronicle—to employ the Heraclitan antithesis of Croce himself. Every event of the past—whether it be the election of yesterday in Massachusetts or a law passed by Hammurabi—is a dead fact so long as it is not of immediate interest and value to someone. When, however, your interest or mine has revitalized Caesar's battle with the Helvetians, so that it becomes a real problem of our immediate lives and the lives of our students, that event becomes history. Having become a part of our existence, it springs again, renewed, from the very bosom of life itself. It has again taken on utility. It again has life and reality, and becomes a point of departure for action. Herein lies the justification of chronicles and chroniclers, according to Signor Croce. The human spirit demands that these mute facts be preserved, because of its future needs and interests, which are not to be predetermined. Out of this conception of history also arises, necessarily, Croce's rejection of 'contemporary' or 'modern' history, as opposed to 'past' history, except as some such schematizing into periods is a part of the process of thinking about history.

According to his view of history as a thing of the mind, Signor Croce rejects all deterministic conceptions of historical development. By historical determinism he seems to mean all those schemes which are based upon the idea of a goal toward which the world is moving, whether guided by a divine hand, or by some blind seeking after liberty, or by some law of historical evolution. With the rejection of these ideas goes also the rejection of those *causal connections* which have been supposed to tie historical facts together. Equally our bewilderment over periods of decadence is removed, if we follow Croce in rejecting the deterministic attitude; and we may go about the study of these so-called decadencies to "seek out what new and greater thing was being developed by means of their dialectic" (78).

I am not sure that Signor Croce has not, while urging us to abandon all the old 'philosophies of history', immediately offered us a new one. In place of the progress in human events, which he discards (as do many others of us), he seems to offer another type of progress, which lies in the continual deepening of that process of the human mind called historical understanding. This he defines as "an ever-increasing consciousness of" human things (77). It is true that the old type of gyves that historians have been wearing is out of fashion. Is Signor Croce offering us a new fashion in gyves? I am suspicious that he is; but it may be that I misinterpret him, for the reading of Croce's stimulating and suggestive book is no child's play for a non-philosophical mind such as mine.

Signor Croce's chapter upon Greco-Roman historiography will be of especial interest to those who find their vocation, and chief devotion, in the world of the ancient Classics. His treatment of this subject is

dominated by the idea expressed above that the questions proposed by the modern spirit, as represented in historiography, present a breadth of inquiry greatly widened and deepened beyond the scope proposed to themselves by the ancient historiographers. According to Croce, the ancients did not realize that the progressive force in history was "spiritual value". Neither did I, I must confess—until the thought was presented to me by Croce's book. I wonder if you did.

If the reviewer may accept Croce's view of the ethical end of historiography (which he does *not* do), that it is the province of the historian to "explain and not condemn", to pronounce only positive judgments and forge the chains of good, he is relieved of the heavy responsibility of adverse criticism. He may then close this review by recommending the book to you as the work of an exceedingly well-informed and penetrating mind, kindly and gracious, and altogether well worth reading.

CORNELL UNIVERSITY

WILLIAM L. WESTERMANN

PLUVIAE APRILES

PALINODIA IN CARMEN DE REDEUNTE VERE¹

Aurae vernae refugerunt;
brumae dies redierunt:
pluit, ningit, fulgurat.
Sol velatur gloriosus;
aër niger, procellosus,
Boreas nos verberat.

Undae fluminum increscunt,
nota litora latescunt,
gurgues vastus cernitur.
Tristes languent nunc carinae,
languent fustes atque pilae,
foci flamma quaeritur.

Noli, anima, lugere,
Boreae nec invidere
brevem hanc victoriam!
Pluvias post procellosas,
dies post tenebricosas
veris cernes gloriam!

E Collegio Campiano Pratocanensi, Wis.,
a. d. III. Id. Apr. MCMXXII.

A. F. GEYSER, S. J.

CANTILENA CENATICA¹

Carmen vanum et Buranum²,
nec Latinum nec Romanum,
at saltem Columbianum,
urbis natum gurgite,

¹For this Carmen see THE CLASSICAL WEEKLY 15.144.

²Written for a dinner in New York, August 2, 1922, in honor of Professors Van Buren and Curtis, of the American Academy in Rome. The former had come over to give a course of five lectures at Columbia during the Summer Session. The classical instructors in that session were present, with some members of the winter staff.

³The allusion is to the Carmina Burana, medieval songs from the abbey of Benediktbeuern in Bavaria.

coniunctissimi sodales,
aestivi contubernalis
sociique hiemales,
ut cantetis, surgite,

qui, edocti antiquorum
litteras et artes, morum
sat periti Romanorum,
per blandiloquentiam
virgines tam canescentes
eruditae, quam florentes,
iuvenumque vagas mentes
ad seram scientiam,

ut, nonnihil mox progressi,
tum laboribus defessi,
domum omnes nunc regressi
vestras laudes concinant,
neve iam posteriores,
immo spatio priores,
lampada quasi cursores
confovere desinant.

Ecce adsunt hic nostrates,
quibus aequae civitates
antiquorum ac penates
cogniti sunt penitus,
qui sepulcra effoderunt,
et, quocumque incesserunt,
ceterorum excusserunt
errores radicitus,

ut Teutonica doctrina,
summa quondam disciplina,
velut dea Capitolina,
nostris tandem cedere
cogeretur³, altiore
arce⁴ iam potitis, ore
de qua nil rotundiore
tonuerunt temere.

Namque nunc haud secundani
verticem Americani
modico tumore plani
obtinere Ianiculi⁵,
luce quod peculiari
nitet, aura singulari
mons et unde aestimari
colles possint Romuli.

Hos, collegae, salutemus!
quos advectos pergaudemus,
quorum discessum dolemus;
perbrevis ut redeant,
ad laetantes reverturi,
certiores nos facturi,
quantum qui isti telluri
student Romae floreat!

At vos sileatis, venti!
et tempestates trementi
linteo, rauco rudenti,
saeviores sicubi
fiant, Aeolo regantur!
Quae hic vota nuncupantur
a libentibus reddantur
mox Fortunae Reduci!

COLUMBIA UNIVERSITY

FRANK GARDNER MOORE

³The German Archaeological Institute, long domiciled on the Capitol, is now closed.

⁴I.e. the Janiculum.

⁵This whole stanza is deeply indebted to Martial 4.64.